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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,500	03/16/2004	Kaichang Li	245-67929-01	3653

24197 7590 11/24/2006  
KLARQUIST SPARKMAN, LLP  
121 SW SALMON STREET  
SUITE 1600  
PORTLAND, OR 97204

EXAMINER
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NUTTER, NATHAN M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/802,500

Applicant(s)

LI ET AL.

Examiner

Nathan M. Nutter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-16 and 19-35 is/are pending in the application.
- 4a) Of the above claim(s) 13-16,31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12, 19-30 and 33-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 September 2006 has been entered.

### ***Response to Amendment***

In response to the amendment filed 11 September 2006, the following is placed in effect.

The rejection of claims 1, 3 and 6 under 35 U.S.C. 102(b) as being clearly anticipated by Sarjeant (US 3,285,801) is hereby expressly withdrawn.

The following new rejections are being presented.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-12 and 33-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably

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convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The concept of excluding a "phenol-formaldehyde resin or a urea-formaldehyde resin" is not disclosed in the Specification, as originally filed. Nothing is disclosed in the Specification that specifically excludes these resins.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-12, 19-31 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lehtinen et al (US 6,030,562) or Lloyd et al (US 6,368,529) in view of Brode, III et al (US 6,716,421) or Blount (US 4,382,136) and taken with Falkehag (US 3,697,497), newly cited.

The patent to Lehtinen et al (US 6,030,562) teaches the manufacture of a composite that may include "at least one lignin component; at least one amine compound; and at least one boron compound (claim 1)," using an industrial lignin (claim 3), with inclusion of a zinc borate of "(a)bout 0.1% to about 3.0% (claim 5) and using a polyamine, melamine, (claim 6), as recited and claimed herein. Note column 2 (lines 19-

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37) for the inclusion of industrial lignin to which may be added zinc borate at column 2 (lines 42 et seq) and melamine (a polyamine) at column 3 (lines 14-29).

The patent to Lloyd et al (US 6,368,529) teaches the manufacture of a composite that may include "at least one lignin component; at least one amine compound; and at least one boron compound (claim 1)," with inclusion of a borate compound that may be present as calcium borate in a "range of about 0.1% to about 4% by weight (claim 5)" and using a polyamine, melamine, (claim 6), as recited and claimed herein. Note column 3 (lines 7-30) for the inclusion of melamine resin and lignin to which may be added calcium borate at column 3 (lines 53-63).

The reference to Brode, III et al (US 6,716,421) teaches the use of lignin, or degraded or decayed lignin, in a composition that comprises a boron-containing compound and an amine compound, as herein claimed. Note column 3 (lines 60 et seq.) for the employment of boron compounds, specifically column 15 (lines 1-11 and 29-31), which, at the paragraph bridging column 15 to column 16, is included in amounts as recited and claimed herein. The reference shows the amine compounds at column 16 (lines 29-36 and 62-64). The lignin components are shown at column 16 (lines 8-26).

The patent to Blount (US 4,382,136) shows the use of broken down lignin, that may comprise decomposed plant material at column 2 (lines 5-13). Further, note column 1 (line 49) to column 2 (line 4). The patent teaches the inclusion of borates at column 7 (lines 42-49) and polyamines at the paragraph bridging column 7 to column 8.

The reference to Falkehag teaches the use of a demethylated lignin in compositions comprising polyamines. Note the Abstract.

The primary references to Lloyd et al and Lehtinen et al teach essentially what is recited for the broad claims except that the employment of decayed or degraded lignins are not taught. The secondary references to Brode, III et al and Blount show these features to be conventional equivalents in compositions containing lignins. As such, employment of those lignins in the composition as disclosed by Lloyd et al would have been an obvious modification to a practitioner having an ordinary skill in the art. No unexpected results are shown on the record with regard to the choice of lignin materials since, even in a charred or degraded state lignin would maintain most of its chemical identity, as effective to produce the compositions as recited and claimed herein.

### ***Response to Arguments***

Applicant's arguments filed 11 September 2006 have been fully considered but they are not persuasive.

In view of the new grounds of rejection, the arguments are deemed to be moot.

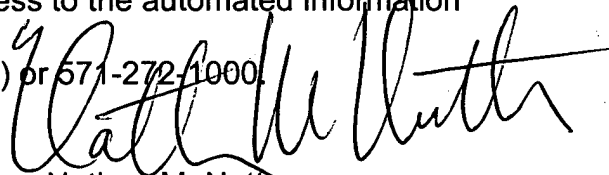
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter  
Primary Examiner  
Art Unit 1711

nmn

17 November 2006